

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

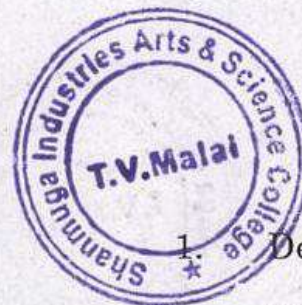
16. Write the synthetic route for the following polymers
- PVC
 - PMMA
 - Nylon 6
 - Polythiophene.
17. Explains in detail about the stereochemistry of polymers with suitable examples.
18. Explain how the molecular weight of polymer is determined by Osmometry method.
19. Write the preparation, properties and uses of Polytetrafluoroethylene.
20. Explain in detail about the thermoplastic polymer and thermosetting polymer with suitable examples.
-

NOVEMBER/DECEMBER 2025

GOCH44A/DOCH44A — POLYMER AND PLASTICS

Time : Three hours

Maximum : 75 marks



SECTION A — ($10 \times 2 = 20$ marks)

Answer ALL questions.

1. Define Co-ordination Polymerization.
2. Why carbohydrate is a macromolecule? Write the structure of monomers..
3. Polymers are formed from identical monomers which are called as _____ polymer and give any one examples.
4. Define the Glass transition temperature (T_g).
5. What do you mean by Co-polymerization and give two examples?
6. What is the role of benzyl peroxide in the polymerization reaction?

7. Among following two polymers, which one used as a conducting polymer and why?

- (a) Polyethene
- (b) Polyacetylene.

8. Styrene is undergoes polymerized with free radical catalyst _____ is the product and write the product formation reaction.

9. Write Note on Plasticizer.

10. Give any two uses of thermoplastic and thermosetting resins.



SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Differentiate between Nylon and polyethene.

Or

(b) In the following which is the thermosetting polymer?

- (i) Bakelite or
- (ii) PVC.

12. (a) Account on Isotactic and Syndiotactic polymer.

Or

(b) Distinguish between Linear and branch polymers.

13. (a) Define the Graft Copolymerization and explain the synthetic methods.

Or

(b) What is the similarity and dissimilarity of Homo and Copolymers?

14. (a) Give two examples for natural polymer and give their applications and properties.

Or

(b) In what way Buna S polymer is differ from Buna N polymer explain with suitable examples.

15. (a) Differentiate between resin and plastics with appropriate example.

Or

(b) Enlist the constituents of plastics.